

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283)
Rabbit Polyclonal Antibody
Catalog # ALS16925**Specification**

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Product Information

Application	IHC
Primary Accession	Q08209
Other Accession	5530
Reactivity	Human, Mouse, Rat, Rabbit, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58688

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Additional Information**Gene ID** 5530**Other Names**

PPP3CA, Calcineurin A, CALN, CALNA, CALNA1, CNA1, PPP2B, Calcineurin A alpha, CAM-PRP catalytic subunit, CCN1, CNA, CNA alpha, pp2b-alpha

Target/Specificity

Identifies a band at ~61kD on a WB.

Reconstitution & Storage

PBS, pH 7.4; 50% glycerol, 0.09% sodium azide. Store at -20°C.

Precautions

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) is for research use only and not for use in diagnostic or therapeutic procedures.

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Protein Information**Name** PPP3CA ([HGNC:9314](#))**Synonyms** CALNA, CNA**Function**

Calcium-dependent, calmodulin-stimulated protein phosphatase which plays an essential role in the transduction of intracellular Ca(2+)-mediated signals (PubMed:15671020, PubMed:18838687, PubMed:19154138, PubMed:23468591, PubMed:30254215). Many of the substrates contain a PxlxIT motif and/or a LxVP motif (PubMed:17498738, PubMed:<a

[17502104](http://www.uniprot.org/citations/17502104), PubMed: [22343722](http://www.uniprot.org/citations/22343722), PubMed: [23468591](http://www.uniprot.org/citations/23468591), PubMed: [27974827](http://www.uniprot.org/citations/27974827)). In response to increased Ca(2+) levels, dephosphorylates and activates phosphatase SSH1 which results in cofilin dephosphorylation (PubMed: [15671020](http://www.uniprot.org/citations/15671020)). In response to increased Ca(2+) levels following mitochondrial depolarization, dephosphorylates DNM1L inducing DNM1L translocation to the mitochondrion (PubMed: [18838687](http://www.uniprot.org/citations/18838687)). Positively regulates the CACNA1B/CAV2.2-mediated Ca(2+) release probability at hippocampal neuronal soma and synaptic terminals (By similarity). Dephosphorylates heat shock protein HSPB1 (By similarity). Dephosphorylates and activates transcription factor NFATC1 (PubMed: [19154138](http://www.uniprot.org/citations/19154138)). In response to increased Ca(2+) levels, regulates NFAT-mediated transcription probably by dephosphorylating NFAT and promoting its nuclear translocation (PubMed: [26248042](http://www.uniprot.org/citations/26248042)). Dephosphorylates and inactivates transcription factor ELK1 (PubMed: [19154138](http://www.uniprot.org/citations/19154138)). Dephosphorylates DARPP32 (PubMed: [19154138](http://www.uniprot.org/citations/19154138)). May dephosphorylate CRT2 at 'Ser-171' resulting in CRT2 dissociation from 14-3-3 proteins (PubMed: [30611118](http://www.uniprot.org/citations/30611118)). Dephosphorylates transcription factor TFEB at 'Ser-211' following Coxsackievirus B3 infection, promoting nuclear translocation (PubMed: [33691586](http://www.uniprot.org/citations/33691586)). Required for postnatal development of the nephrogenic zone and superficial glomeruli in the kidneys, cell cycle homeostasis in the nephrogenic zone, and ultimately normal kidney function (By similarity). Plays a role in intracellular AQP2 processing and localization to the apical membrane in the kidney, may thereby be required for efficient kidney filtration (By similarity). Required for secretion of salivary enzymes amylase, peroxidase, lysozyme and sialic acid via formation of secretory vesicles in the submandibular glands (By similarity). Required for calcineurin activity and homosynaptic depotentiation in the hippocampus (By similarity). Required for normal differentiation and survival of keratinocytes and therefore required for epidermis superstructure formation (By similarity). Positively regulates osteoblastic bone formation, via promotion of osteoblast differentiation (By similarity). Positively regulates osteoclast differentiation, potentially via NFATC1 signaling (By similarity). May play a role in skeletal muscle fiber type specification, potentially via NFATC1 signaling (By similarity). Negatively regulates MAP3K14/NIK signaling via inhibition of nuclear translocation of the transcription factors RELA and RELB (By similarity). Required for antigen-specific T- cell proliferation response (By similarity). Dephosphorylates KLHL3, promoting the interaction between KLHL3 and WNK4 and subsequent degradation of WNK4 (PubMed: [30718414](http://www.uniprot.org/citations/30718414)). Negatively regulates SLC9A1 activity (PubMed: [31375679](http://www.uniprot.org/citations/31375679)).

Cellular Location

Cytoplasm. Cell membrane; Peripheral membrane protein. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:P63329}. Cytoplasm, myofibril, sarcomere, Z line {ECO:0000250|UniProtKB:P63329}. Cell projection, dendritic spine. Note=Colocalizes with ACTN1 and MYO22 at the Z line in heart and skeletal muscle (By similarity). Recruited to the cell membrane by scaffold protein AKAP5 following L-type Ca(2+)-channel activation (PubMed:22343722) {ECO:0000250|UniProtKB:P63329, ECO:0000269|PubMed:22343722}

Tissue Location

Expressed in keratinocytes (at protein level) (PubMed:29043977). Expressed in lymphoblasts (at protein level) (PubMed:30254215).

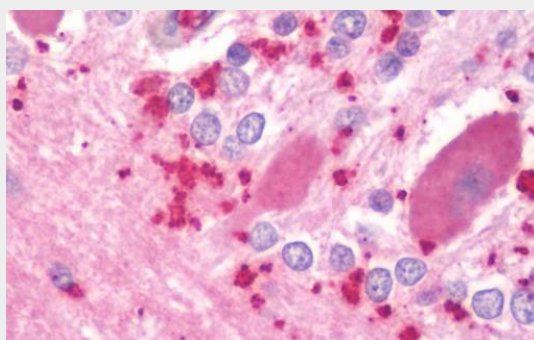
Volume

50 µl

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Images

Anti-PPP3CA / CCN1 / Calcineurin A antibody IHC staining of human brain, cerebellum.

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - Background

Calcium-dependent, calmodulin-stimulated protein phosphatase. Many of the substrates contain a PxIxIT motif. This subunit may have a role in the calmodulin activation of calcineurin. Dephosphorylates DNM1L, HSPB1 and SSH1.

PPP3CA / CCN1 / Calcineurin A Antibody (aa364-283) - References

Muramatsu T., et al. Biochim. Biophys. Acta 1178:117-120(1993).
Chiocco M.J., et al. Subst. Use Misuse 45:1809-1826(2010).
Landreville S., et al. Mol. Vis. 17:1324-1333(2011).
Ota T., et al. Nat. Genet. 36:40-45(2004).
Bechtel S., et al. BMC Genomics 8:399-399(2007).